

CLAIMS

1. A multi-layer resin tube used as a fuel tube for automobiles, which is provided with a body layer consisting of a thermoplastic resin and a barrier layer consisting of a thermoplastic resin controlling fuel permeation in this order from the side of an outer layer thereof,

wherein the barrier layer is gradient-constituted such that said layer is rich in an adhesive component at the side of an outer layer and to be rich in a barrier component at the side of an inner layer.

2. The multi-layer resin tube according to claim 1, wherein the gradient constitution of the barrier layer is composed of plural layers, and the outermost layer comprises 0.1 to 30 % by weight of a barrier component, and the innermost layer comprises 0.1 to 30 % by weight of an adhesive component.

3. The multi-layer resin tube according to claim 2, wherein the gradient constitution of the barrier layer is composed of plural layers, and the outermost layer comprises 1 to 10 % by weight of a barrier component, and the innermost layer comprises 0.5 to 3 % by weight of an adhesive component.

4. The multi-layer resin tube according to claim 2, wherein the body layer comprises a polyamide.

5. The multi-layer resin tube according to claim 4, wherein the barrier component is based on a fluorine resin, and the adhesive component is based on a modified fluorine resin.

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6. The multi-layer resin tube according to claim 5, wherein the barrier component is based on an ethylene-tetrafluoroethylene copolymer (referred to hereinafter as "ETFE") and the adhesive component is based on a modified ethylene-tetrafluoroethylene copolymer (referred to hereinafter as "modified ETFE").

7. The multi-layer resin tube according to claim 6, wherein the barrier component is based on an ethylene-tetrafluoroethylene copolymer blended with a conductive filler (referred to hereinafter as "conductive ETFE").

8. The multi-layer resin tube according to claim 7, wherein the conductive filler is carbon black.

9. The multi-layer resin tube according to claim 1, 2, 3, 4, 5, 6, 7 or 8, wherein the multi-layer resin tube has a three-layer structure including two layers in the barrier layer and one body layer.

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